



CRMEP

Coastal Restoration Monitoring and Evaluation Program

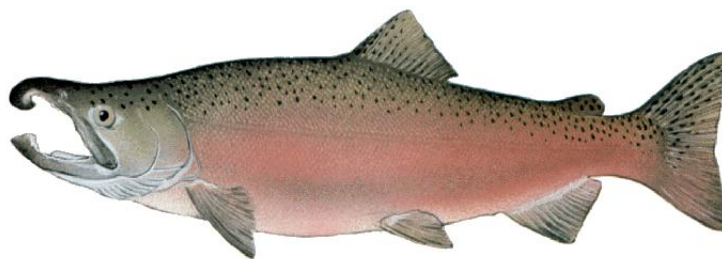
Site Handbook





Watershed Stewards Project Mission

The mission of the AmeriCorps Watershed Stewards Project is to conserve, restore, and enhance anadromous watersheds for future generations by linking education with high quality scientific practices.



Coho Salmon



Table of Contents

Introduction	4
Site Description	4
Calendar of Duties	5
Description of Site Duties	6
ISPs and Outreach Events	11
ISP Information	11
Outreach Information	11
Education	12
Education Notes	12
Site / Region Specific Education Resources	12
Local Ecology	13
Descriptions of Local Ecology	13
Housing and Local Resources	14
Housing Contact List	14
Local Resource Contacts	14
Community Information	15
Map of Area	15
Community Demographics	16
Community Services	16
Entertainment and Community Events	16
Resources for Affordable Entertainment Options	16
Recurring Event List	16
Mentor Bios	17



Introduction

Site Description

Location 1455 J Sandy Prairie Ct.

Fortuna, CA 95540

(next to the Fortuna CCC Center and WSP Office)

Agency Affiliation California Department of Fish and Game, Coastal Restoration Monitoring and Evaluation Program (CRMEP)

General Ecology Fortuna, “The Friendly City,” is located within the Eel River Valley, a flood plain devoted primarily to agriculture. The Eel River serves as a throughway for many salmonids to smaller creeks throughout the greater river system. Groves of redwoods, either protected by our parks system, or managed for timber production, surround the neighboring area. Fortuna is subject to foggy and rainy coastal weather patterns, but is slightly sunnier than Eureka and Arcata.

Field work for this site occurs in a variety of ecosystems and climates throughout Humboldt, Del Norte, Siskiyou, Trinity, Mendocino, Sonoma, Marin, and Napa Counties.



Photo taken from “The Wildcat” (Mattole Road) looking north where the Eel River estuary is visible in the distance. Source: Matt Bray, CRMEP Member Year 17 & 18.



Calendar of Duties

Month	Location	Site Duties	Work Load	Typical Work Hours
<i>examples:</i>	<i>field, office, classroom</i>	<i>spawner surveys, habitat typing, seed collection, planting, educating</i>	<i>busy, moderate, heavy</i>	<i>Days of week and hours per day: ex: M-F 8-4:30</i>
Fall				
October	Field / Office	Field: Pre- and Post-Treatment Effectiveness Monitoring. Possible Habitat Typing. Office: Generate Project Maps, Photo Contact Sheets, and Keep all data sheets and field gear organized.	Busy	Monday – Thursday 7:00 am – 5:00 pm **Members should expect that some additional work opportunities, such as ISPs, restoration projects, outreach events, conferences, and trainings may occur outside of typical work hours.
November	Field / Office	Field: Pre- and Post-Treatment Effectiveness Monitoring. Possible Habitat Typing. Office: Data entry, Data QA/QC, Case Studies, Checklist Development.	Busy	Monday - Thursday 7:00 am – 5:00 pm
Winter				
December	Office / Field	Data entry, Data QA/QC, Case Studies, Report scanning, Checklist Development. Spawner Surveys.	Moderate	Monday - Thursday 7:00 am – 5:00 pm
January	Office / Field /	Data entry, Data QA/QC, Case Studies, Checklist Development. Spawner Surveys.	Moderate	Monday - Thursday 7:00 am – 5:00 pm
February	Office / Field / Classroom	Data entry, Data QA/QC, Case Studies, Checklist Development. Real Science Education Spawner Surveys.	Moderate	Monday - Thursday 7:00 am – 5:00 pm
Spring				



March	Office / Field / Classroom	Data entry, Data QA/QC, Case Studies, Checklist Development, Real Science Education. Possible Spawner Surveys ISP prep.	Moderate	Monday - Thursday 7:00 am – 5:00 pm
April	Office / Field / Classroom	Notification Letters, Prepare Files for Field, Final Report Collection, Finish Winter Projects, and Conduct some field work (Effectiveness Monitoring). Real Science and ISP prep.	Moderate	Monday - Thursday 7:00 am – 5:00 pm
May	Office / Field / Classroom	Notification Letters, Prepare Files for Field, Final Report Collection, Finish Winter Projects, and Conduct some field work (Effectiveness Monitoring). Real Science and ISP.	Moderate	Monday - Thursday 7:00 am – 5:00 pm
Summer				
June	Field / Office	Field: Pre- and Post-Treatment Effectiveness Monitoring. Possible Habitat Typing. Office: Generate Project Maps, Photo Contact Sheets, and Keep all data sheets and field gear organized.	Busy	Monday - Thursday 7:00 am – 5:00 pm
July	Field / Office	Field: Pre- and Post-Treatment Effectiveness Monitoring. Possible Habitat Typing. Office: Generate Project Maps, Photo Contact Sheets, and Keep all data sheets and field gear organized.	Busy	Monday - Thursday 7:00 am – 5:00 pm
August	Field / Office	Field: Pre- and Post-Treatment Effectiveness Monitoring. Possible Habitat Typing. Office: Generate Project Maps, Photo Contact Sheets, and Keep all data sheets and field gear organized.	Busy	Monday - Thursday 7:00 am – 5:00 pm

Description of Site Duties



*Pre- and
Post-
Treatment
Effectiveness
Monitoring*

The California Department of Fish and Game (DFG) administers the Fisheries Restoration Grant Program (FRGP) to fund watershed restoration projects in coastal California. This competitive grant program focuses on restoring salmon and steelhead habitat by addressing a wide variety of watershed issues. The Coastal Restoration Monitoring and Evaluation Program (CRMEP) monitors FRGP restoration projects to assess the effectiveness of restoration efforts and inform future resource management decisions. WSP Members will work closely with CRMEP biologists to complete this work.

Our field season typically runs from May to November; however, some monitoring takes place during winter and spring months. Effectiveness monitoring is conducted on a wide variety of restoration project types, including road decommissioning/upgrading, instream habitat enhancement, fish passage improvement, fish screening of diversions, invasive vegetation control, tree planting, and bank stabilization. Effectiveness monitoring employs rapid field assessments utilizing treatment-specific qualitative checklists, photo monitoring, snorkel surveys, and project location documentation.

WSP members placed at the CRMEP site will assist with monitoring in Humboldt, Del Norte, Siskiyou, Trinity, Mendocino, Sonoma, Marin, and Napa Counties and may require being in the field for up to 4 days at a time. During the field season, members travel with their mentors to project locations and often spend a significant amount of time away from home. Up to 70% of effectiveness monitoring takes place outside of Humboldt County and scheduling often occurs last minute with little more than a day or two of notice.

Breakdown of work at CRMEP:

Monitoring Field Work: 40%

Other Field Surveys and Data Collection: 15%

Restoration: 5%

Report Writing and Data Entry: 25%

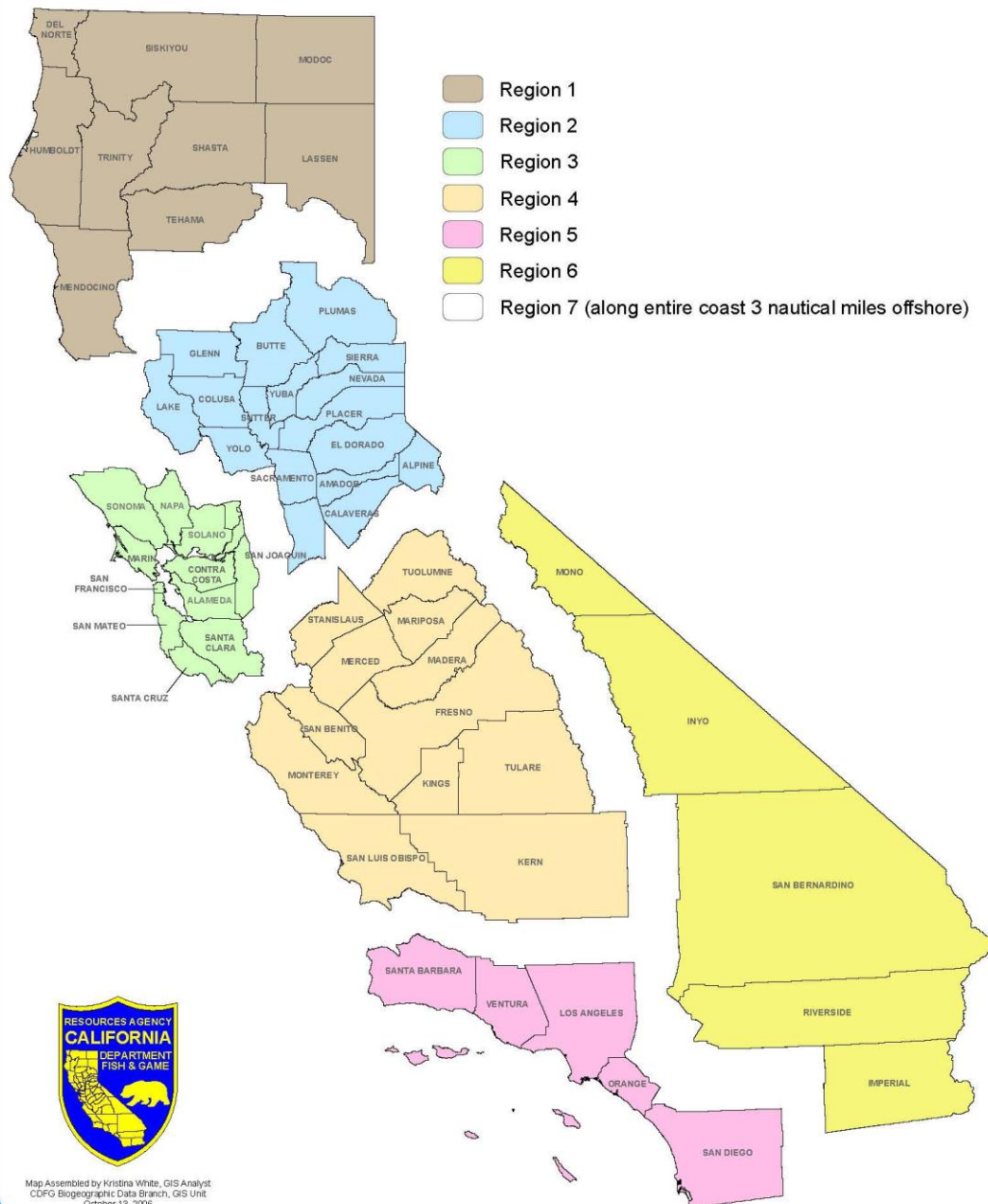
Lab Work: 0%

Education: 10%

Outreach: 5%



2006 California Department of Fish and Game Regions



CDFG Region Map (zoom to 200% to read county names). CRMEP WSP Members will conduct monitoring in Regions 1 and 3 (Humboldt, Del Norte, Siskiyou, Trinity, Mendocino, Sonoma, Marin, and Napa Counties).



2008 Pre-Treatment Photo of a culvert that was blocking fish passage on Horse Creek, Tributary to the Klamath River.



2009 Post-Treatment Photo of the bridge that replaced the culvert on Horse Creek. Fish now have access to 1.5 miles of habitat upstream of the crossing.

Data Entry and Report Writing

Office work for the CRMEP consists of :

- ❖ Assembling grant information and creating new grant evaluation files
- ❖ Downloading photos taken in the field and creating photo contact sheets
- ❖ Downloading/uploading geospatial data and creating electronic maps using a GIS
- ❖ Organizing files and data sheets
- ❖ Entering monitoring data into two databases: the California Habitat Restoration Project Database (CHRPD) and the FRGP Monitoring Database
- ❖ Updating monitoring documents and datasheet drafts

Additional duties include creating photo atlases, writing restoration project case studies, or designing posters.



CRMEP staff and WSP members present a poster highlighting photographic monitoring techniques at the 2011 Salmonid Restoration Federation Conference in San Luis Obispo, CA. From left to right: Josh Troyer, CRMEP biologist; Todd Carlin, Year 17-18 CRMEP WSP member; Florie Consolati, former CRMEP biologist; Matt Bray, Year 17-18 CRMEP WSP Member; and Trevor Lucas, CRMEP biologist.

*Assisting
neighboring
placement
sites*

CRMEP shares its office location with three other WSP placement sites in Fortuna, as well as the main WSP program office. With an additional five placement sites in nearby Eureka, Arcata, and Petrolia, CRMEP members have many opportunities to diversify their WSP experience by assisting those neighboring sites.

A few examples include:

*Spawner
Surveys*

CRMEP members will have the opportunity to participate in spawner surveys alongside DFG Fortuna members. Surveys start at the end of November and seek to enumerate adult salmon and steelhead as they return to freshwater spawn. Data collected during spawner surveys inform fisheries management decisions and provide our members with opportunities to view adult salmonids in their native streams.

*Habitat
Typing*

If time permits, CRMEP members may also have the opportunity to participate in habitat typing. These surveys are conducted by DFG Fortuna members and occur in the summer. Surveys seek to document quality and quantity of salmon habitat within the survey reaches. Biologists then use these data to prioritize habitat restoration needs. Habitat typing is an excellent opportunity for WSP members to hone their field data collection skills and learn specific habitat requirements of California salmonids.



Electrofishing Assistance

CRMEP members may also have the opportunity to assist biologists with electrofishing. Biologists use backpack electrofishers to perform a wide variety of functions and require additional assistance from WSP members to conduct effective surveys. Fortuna biologists use electrofishers primarily as a tool to relocate fish from locations potentially harmful to aquatic life, such as dewatered stream reaches where restoration work is taking place.

ISPs and Outreach Events

ISP Information

Getting Started

Ideally, CRMEP members complete their Individual Service Project by May 1 in order to concentrate on field duties. WSP has had great success in the past recruiting Humboldt State students for volunteer events, so it's also been beneficial for members to complete their ISP before HSU students leave for the summer. The WSP website has a great checklist for everything you need to do (all the forms, paperwork, and procedures). The best thing to do is talk to your mentor. They may already have some contacts and project ideas. HFAC (Humboldt Fish Action Council) has proven to be a reliable resource for ISP opportunities, but don't feel that you have to do one of their projects. Get creative! Are there any community watershed needs that should be addressed?

Media Phone Lists, Check Lists, Volunteer Forms, Liability Forms, Etc.

<http://www.ccc.ca.gov/work/programs/AmeriCorpsPrograms/wsp/Pages/wsp1.aspx>

The main WSP website has a great deal of information regarding ISPs. There are specific requirements for all ISPs. See your current member handbook or the website for your year's requirements.

After Your ISP

Be sure to fill out any required follow-up paperwork to finalize your ISP. Check the website for the appropriate forms and contact the appropriate team leader to ensure the required documents are submitted.

Outreach Information

Various –

Talk to your Team Leader!

There are many outreach opportunities available throughout the year. Hatchery tours, highway cleanups, additional education visits, and tabling at local events are all opportunities for members to promote WSP's mission. Members are encouraged to contact their Team Leader to exchange ideas and explore outreach opportunities.

Required Service Days

WSP members are required to do four hours of community service for Martin Luther King Jr. Day, Cesar Chavez Day, National Service Day, and Make a Difference Day. Hours may be completed on the day or within the week of the event. Team Leaders will arrange opportunities or you may choose your own. Service days are opportunities for members to serve their communities. Consequently, service days do not need to conform to the overall WSP mission.



Education

Education Notes

<i>Getting Started</i>	Real Science education begins with the conclusion of spawner surveys in the winter. This site requires members to complete their Real Science education by May 1 so members can focus on monitoring. Getting your education completed in a timely manner enables you to participate in other activities that this site has to offer.
<i>The Minimum</i>	Members are given the choice of teaching alone or combining efforts with their site partner. If you are teaching with a partner, you are required to visit a minimum of two classes 6 times each (a total of 12 visits). Members generally have time to visit more than the minimum number of classrooms. Your Team Leader will assign classrooms to you at this site.
<i>Set Up a Meeting w/ the Teacher – A 6-Week Education Outline</i>	Your initial visit with your teacher is an opportunity to present your teaching plan and collect feedback that will allow you to tailor that plan to your students' needs/abilities. Coming prepared with an outline for your 6-week course is a great approach and shows the teacher that you are prepared. What do you want to teach the kids? What's your intended curriculum for the entirety of your Real Science visits? What is your preferred schedule? These are all questions that should be addressed at your initial visit with your teacher.
<i>Your Team Leader</i>	Your Team Leader is your primary contact for everything related to your Real Science experience. Your Team Leader can assist you with lesson planning, classroom management, and WSP/teacher communication. Those members that really utilize the skills of their Team Leaders, often leave the classroom feeling more satisfied with their teaching abilities.
<i>The Education Handbook</i>	Your education handbook contains a tremendous amount of information and ideas that can guide you in your teaching experience. If it doesn't have something you want, create your own worksheet, game, or presentation.
<i>Teaching</i>	If you're new to teaching, no sweat! You can do it! Kids are awesome and though you will feel exhausted after teaching a single 1 hour class, you will be surprised by all the things you learned from your students - and you thought you were teaching them!
<i>Wrapping Up</i>	Make your last Real Science visit fun, but don't forget to administer Post-Tests. Check the website for post-Education forms to be filled out.

Site / Region Specific Education Resources

<i>The WSP Office</i>	It's next door.
<i>The World Wide Web</i>	There are quite a few cool salmon related sites that will help supplement your education ideas: http://www.fws.gov/pacific/publications/salmnbk.pdf http://www.salmonnation.com/ http://www.thinksalmon.com/



Local Ecology

Descriptions of Local Ecology

Climate

Fortuna lies on the Northeast shore of the Eel River, about 7 miles from the Pacific Ocean. Like most of the California coast, Fortuna experiences a Mediterranean climate with wet winters, mild summers, and coastally influenced weather patterns.

Native Plants

Humboldt County, and Northern California in general, is well known for its redwood forests. Coast redwoods are the tallest tree species in the world and can reach heights of over 300 feet and can grow more than 20 feet wide.

In addition to coast redwoods, the forests of Northern California include a wide variety of plant species, including Douglas fir, black cottonwood, Sitka willow, bigleaf maple, and red alder. You'll also find California Bay, Madrone, and California Hazel, Coyote Brush, Evergreen Huckleberry, and California Blackberry in abundance.

During field work, beware of the Poison Oak. You'll become familiar with the plant in all of its seasonal forms and quickly determine whether you are allergic.

Invasive Plants

California's native plant species receive heavy competition from a host of non-native plants.

Here are a few:

English Ivy is an invasive vine that has a harmful effect on salmonid habitat by choking out native riparian areas that provide critical shade to stream waters.

Scotch and French Broom- There is a difference between the brooms, but both are either yellow or orange in color and both are invasive. The native broom is purple.

Arundo donax (Giant Reed) – This tall cane can grow 10 feet tall in wet habitat and crowds out other plants.

Himalayan Blackberry- This berry bush has large, sharp thorns. Himalayan Blackberry has ridges along its stems and has leaves bunched up in fives. The native blackberry has smaller thorns and leaves grouped in threes.

Animals

Humboldt County, like half of California, is prime mountain lion habitat. DFG estimates that there are 4,000 to 6,000 mountain lions statewide.

The North Coast/Cascade subpopulation of Black Bears contains roughly half of California's Black Bear population.

Chances are, the first sign of an animal you'll see will be its tracks or scat. Be on the lookout for evidence of: bobcat, mountain lion, black bear, owls, eagles, osprey, wild pigs... oh, and steelhead trout and Chinook and coho salmon, of course!



Housing and Local Resources

Housing Contact List

*Location, location,
location*

The availability of housing depends primarily on where and when you are looking. Affordable rentals in Fortuna can be scarce and most WSP members have better luck finding housing in nearby Arcata or Eureka and commuting/carpooling to Fortuna. Arcata is home to Humboldt State University, so housing is geared more toward college students. Commuting to Fortuna from Arcata takes about 35 minutes (one way) and about 20-25 from Eureka.

Humboldt Craigslist

<http://humboldt.craigslist.org/>

This is probably your best bet.

Tri-City Weekly

www.tricityweekly.com

Times-Standard

<http://www.times-standard.com/>

*Arcata and Eureka
Co-Op Bulletin Board*

Look for flyers for housing posted on their bulletin boards.

*Local Property
Management
Agencies*

Humboldt Property Management: (707) 825-1515 located at 954 H St. in Arcata
Rupp and Associates: (707) 443-7091 located at 1010 7th St. in Eureka

Local Resource Contacts

*The North Coast
Journal*

Walk into any coffee shop and grab yourself a free copy... local happenings, culture, entertainment, events, resources, classes, and articles galore.

<http://www.northcoastjournal.com/>

*Fortuna Chamber of
Commerce*

<http://chamber.sunnyfortuna.com/>

http://www.youtube.com/watch?v=cHODAUCQ168&feature=player_embedded

*The California
Welcome Center in
Arcata*

Many free publications, including a book titled "100 Things To Do In Humboldt County".

1635 Heindon Road
Arcata, CA 95521
(707) 822-3619

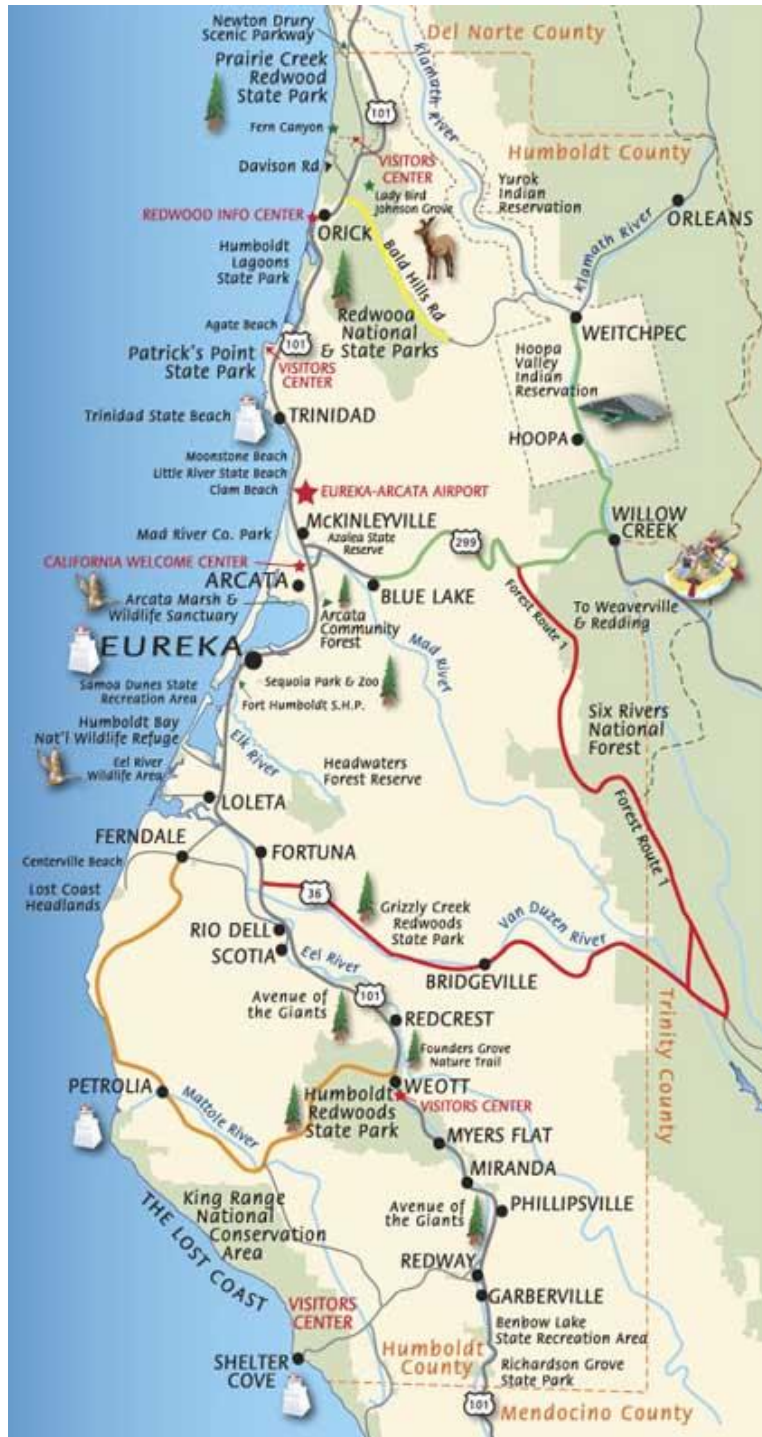
*College of the
Redwoods*

<http://www.redwoods.cc.ca.us/>



Community Information

Map of Area



from www.garberville.org



Community Demographics

- Population* About 134,623 people live in Humboldt County, with 11,926 in Fortuna; 27,191 in Eureka; and 17,231 in Arcata.
- People* An eclectic mix of people from all types of backgrounds. Some raised locally, others come from all over to attend HSU, and others come to escape the hustle and bustle of city life.

Community Services

- Assistance Programs* <http://co.humboldt.ca.us/hhs/ssb/foodstamps.asp>

The modest living stipend provided for member service make most members eligible for nutritional assistance. Members are encouraged to contact County Social Services to enroll in assistance programs.

Entertainment and Community Events

Resources for Affordable Entertainment Options

- The North Coast Journal and HumboldtCounty.com* <http://www.northcoastjournal.com/>
Arcata and Eureka, though they are “big” small towns in a rural county, are culturally rich with a flourishing artist community and music scene. Get out and explore; there is a lot to do and see!
www.humboldtcounty.com
Information on living, entertaining, and sightseeing.
- State and National Parks* www.parks.ca.gov
<http://www.nps.gov/redw/>
- Bowling, Movies, Etc* The cheapest bowling alley (E&O Bowl) is in Blue Lake. The Minor Theater in Arcata is the oldest theater in CA still operating, and great place to see movies. There are also theaters in McKinleyville, Eureka, and Fortuna. The Arcata Theater Lounge www.arcatatheater.com offers old movies and live sports on the big screen as well as music, dance, and other events.
- Trinity Alps Wilderness, King Range NCA* Excellent backpacking during the summer. www.fs.usda.gov/recmain/stnf/recreation
<http://www.blm.gov/ca/st/en/fo/arcata/kingrange/knrcatrails.html>

Recurring Event List

- Festivals, Fairs, and Rodeos* <http://www.northcoastjournal.com/>
There are many annual festivals and fairs (from Jazz to Reggae, BBQ to Oysters) in Humboldt County throughout the year. Many towns host rodeos during the summer as well. Ask locals or keep your eye on the North Coast Journal for listings. There are opportunities to volunteer and table for free or reduced admissions to festivals.
- Arts Alive Eureka & Arcata* Eureka Arts Alive: First Saturday of each month, 6-9 pm.
Arcata Arts Alive: Second Friday of each month, 6-9 pm.
The stores in town stay open late to offer free food, drinks, art, and music.
- Farmer's Markets* Various towns have local farmer's markets. Arcata's Farmer's Market is on Saturdays from April to November. Fortuna's Farmer's Market is on Tuesdays from May to October.



Mentor Bios



Watershed Stewards Project

WSP Mentor Biography

Name: Trevor Lucas

Professional Title: Fisheries Biologist

Placement Site: CRMEP-Fortuna



Work History

Trevor served two consecutive years as an AmeriCorps Watershed Stewards Project Member at Six Rivers National Forest in Eureka after graduating from Humboldt State University. Trevor has been working professionally in the fisheries field on the North Coast ever since, first hired as a seasonal Fisheries Technician for several years post AmeriCorps. Trevor also worked periodically as a Scientific Aide and Research Assistant for the CDFG Steelhead Research and Monitoring Program in Arcata. In 2005, Trevor was provided the opportunity to work in private consulting as a Fish Biologist for Stillwater Sciences and in 2009 for H.T. Harvey and Associates in Arcata. In 2010, Trevor was hired as a Fish Biologist by Pacific States Marine Fisheries Commission to conduct validation and effectiveness monitoring for the Coastal Restoration Monitoring and Evaluation Program, funded by the CDFG Fisheries Restoration Grant Program in the Fortuna DFG office. Trevor has served as a Mentor for WSP Members for two years.

Education

Trevor received a BS in Freshwater Fisheries Biology from Humboldt State University in 1998.

Personal Statement

WSP provided me with the opportunity to get hands on experience working in the fisheries field while making lasting friendships and professional contacts with people who have the passion and skills needed for addressing salmonid population issues on the North Coast and helped foster a lasting dedication to this demanding and satisfying line of work. Thanks WSP!



Watershed Stewards Project WSP Mentor Biography

Name: Josh Troyer
Professional Title: Fisheries Biologist
Placement Site: CRMEP-Fortuna



Work History

Josh began his career with the Oregon Department of Fish and Wildlife working on a variety of fisheries management projects on the lower Columbia River. Josh went on to become a member of the Watershed Stewards Project in 2009. With WSP, he served alongside the California Conservation Corps in Fortuna, CA, planning and implementing fish habitat restoration projects. Currently, Josh is a Fisheries Biologist with the Pacific States Marine Fisheries Commission. With PSMFC, he conducts field investigations to evaluate the effectiveness of habitat restoration work funded through the California Department of Fish and Game Fisheries Restoration Grant Program.

Education

Josh received a Bachelor of Science Degree in earth science from Western Oregon University in 2008.

Personal Statement

As a former WSP member and now a mentor, I am constantly reminded of the direct link between healthy watersheds and healthy communities. WSP is the perfect forum for exploring that relationship and I am proud to continue my association with a program so invaluable to the recovery of salmon and steelhead in California. Thanks, WSP!